U.S. Fish & Wildlife Service

National Fish Passage Program
The Great Lakes, Big Rivers Region

Providing Access to Great Lakes and Big Rivers Historical Habitats

Draft

The goal of the Fish Passage Program is to restore native fish and other aquatic species to self-sustaining levels by reconnecting habitats that have been fragmented by artificial barriers, where such reconnection results in a positive ecological effect.

Removal of the Dutton Locks dam and installation of step pools on the Pelican River, MN. MN Dept. of Natural Resources photo.

What is the Fish Passage Program?

The Fish Passage Program provides technical assistance and Federal funds to: remove, replace, or retrofit artificial barriers; design and construct fishways; support biological surveys of important watersheds; and monitor the effectiveness of these activities. Fish passage projects can be engineered on either private or public lands, but cannot be used on hydroelectric projects licensed by the Federal Energy Regulatory Commission (FERC). All projects are voluntary, and are performed in cooperation with agencies, private organizations, and landowner partners.

A Region Rich in Water Resources and People

The Great Lakes-Big Rivers Region of the U.S. Fish and Wildlife Service is home to more than 30 million people. The Region encompasses the states of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. The Great Lakes are the largest system of surface freshwater on the Earth, and constitute 90% of the surface freshwater in the U.S. The lakes create unique conditions that support a wealth of biological diversity, including more than 130 globally rare species and ecosystems. About 180 fish species are native to the Great Lakes. Species that have declined, in part, because barriers fragmented habitat include lake sturgeon, brook trout, and walleye.

"Big Rivers" in the Regional name refers to the Mississippi, Missouri, and Ohio Rivers. The Upper Mississippi River (UMR) flows approximately 850 miles from Minneapolis, Minnesota, to its confluence with the Ohio River near Cairo, Illinois. About 140 fish species are native to the UMR, and many of those species support valuable recreational and commercial fisheries. Species that have declined, in part, because barriers fragmented habitat, include lake sturgeon, brook trout, walleye, paddlefish, and mussels.

The Great Lakes-Big Rivers Region's fisheries, and the economies that they support, depend on the ability of fish to reach healthy aquatic habitats. Fish in lakes and rivers have evolved life cycle migratory patterns that require the seasonal availability of a variety of

Left: Fish passage barrier on 7-Mile Creek, a Missouri River tributary, IA. IADNR photo. Right: Upper Mississippi River dam. USFWS photo.

river habitats. Unfortunately, thousands of culverts, dikes, water diversions, dams, and other artificial barriers were constructed to impound and redirect water for irrigation, flood control, electricity, drinking water, and transportation. These barriers prevent migration of fish and other aquatic species to important habitats, and as a result nearly one-third of all fish, two-thirds of all crayfish, and three-quarters of all the freshwater mussels in the U.S. are either rare or threatened with extinction.

Some barriers play a beneficial role. In some locations, fish passage barriers protect watersheds from the invasion of aquatic nuisance species. For example, in the late 1800s a canal was dug to connect the once separate Great Lakes and Mississippi River watersheds. Some species of invasive Asian carp are found in the Mississippi River system but not in the Great Lakes, while other invasive species like ruffe and round goby are found in the Great Lakes but not in the Mississippi River system. A barrier is needed to prevent the exchange of those species to protect the ecological integrity and economies of the two watersheds. Barriers are also used in the Great Lakes to limit the distribution of sea lampreys in streams.

The Fish Passage Program in the Great Lakes-Big Rivers Region will continue the partnership with Federal, State, Tribal, and local aquatic nuisance species programs to ensure that activities result in only positive benefits to natural resources.

Program Accomplishments

Since 1999, the Regional Fish Passage Program and 33 partner organizations have completed 18 projects that improved fish passage. Those projects removed artificial barriers and restored access by fishes to 182 miles of river habitat and 960 acres of wetlands habitat. Removing those barriers reconnected native fishes with their historic spawning and nursery habitats, and that reconnection is helping to restore degraded fish populations.

Before and after bridge reconstruction on the North Branch of the Manistee River at Sharon Road, Michigan. USFWS photos.

Examples of program accomplishments include the following:

- A single-span wooden bridge replaced an undersized culvert on the North Branch of the Manistee River, MI, restoring access of brook trout and other species to 12 stream miles during all river flow conditions.
- The movement patterns of paddlefish in the Mississippi River and its tributaries were studied to facilitate planning for enhanced fish passage at locks and dams.
- The existing dam located at the Dutton Locks on the Pelican River, MN was replaced with a single channel rock rapids, which contains step pools and a ford crossing that allows lake sturgeon to again access 10 miles of riverine habitat.
- Educational workshops have been conducted to promote better fish passage at road crossings. Workshop participants learn how to design and construct fish-friendly and habitat-friendly road crossings.

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January 2003

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